

# ATOMIC ENERGY *newsletter*®

A SERVICE FOR INDUSTRY BUSINESS ENGINEERING AND RESEARCH  
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Dear Sir:

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The nuclear instrument firm, R-C Scientific Instrument Co., Inc., Playa del Rey, Calif., has now been acquired by American Electronics, Inc. Under the terms of the acquisition, American Electronics will exchange 13,500 shares of its common stock for all of the assets of R-C Scientific Instrument Co., which will operate as a wholly-owned subsidiary of American Electronics under the name of Reed-Curtis Nuclear Industries ..... In another corporate acquisition, Beckman Instruments, Inc., nuclear device firm of Fullerton, Calif., has bought, in a cash transaction, the assets of Place Industrial Ceramics Corp., El Segundo, Calif. Beckman's interest stemmed from Place's resistance film element that has applications in Beckman instruments. (Other FINANCIAL news, p. 3 this LETTER.)

Four new nuclear-reactor-powered submarines are included in the U.S. Navy's 33-ship building program for fiscal 1956, Secretary of the Navy Charles S. Thomas revealed in Washington last fortnight. Two of the nuclear craft will be built by General Dynamics Corp., at its Electric Boat division, in Groton, Conn. One will be designed to attack enemy surface shipping, while the other will be for radar picket service. A third nuclear submarine for attacking shipping will be built at the Mare Island Naval Shipyard, Calif.; the fourth, also for attacking shipping, will be constructed at the Portsmouth, N.H. naval shipyard. (Other REACTOR news, p. 2 this LETTER.)

Latest Canadian uranium mining firm to receive a uranium ore buying contract from the Canadian government owned Eldorado Mining & Refining, Ltd. is National Explorations. The contract covers uranium ore shipments from National's property in the Beaverlodge area, N. Saskatchewan. (Other RAW MATERIAL news, p. 5 this LETTER.)

A review of the literature covering irradiation effects on natural rubber and certain synthetics (polyethylene, etc.) is now available (50¢) from Office of Technical Services, Wash. 25, D.C., as No. PB-111529. (Other BOOKS, LITERATURE, p. 3 this LETTER.)

A contract to supply sulfuric acid to the uranium mines of the Blind River uranium field has now been given to Arthur G. McKee & Co. of Canada, Ltd., by Noranda Mines. Noranda's plant, which will be the largest sulfuric acid producer in Canada, will be built at Cutler, Ontario, and will produce 500 tons per day. Raw material will be pyrite from the Noranda mine or its subsidiaries. (Other CONTRACTS LET, BIDS ASKED, p. 5 this LETTER.)

Courses in radiological physics and health physics are being given for the first time by the University of Chicago this Fall. Both two-year programs leading to a master's degree, they are the first to be offered by a non-governmental agency. The only such training available previously was that given by the USAEC at Oak Ridge. (Other COURSES, CONFERENCES, p. 5 this LETTER.)

ATOMIC ENERGY BUSINESS REPORTS...

FORMER USAEC CHAIRMAN HEADS NEW ORGANIZATION:- A new firm whose scope will include counselling in the production of energy from all sources, including atomic energy, has now been formed by David E. Lilienthal (first chairman of the USAEC), Gordon R. Clapp (former chairman of Tennessee Valley Authority), and the banking firm of Lazard Freres & Co., New York. This new concern, Development & Resources Corp., 44 Wall St., New York, will provide organizational, technical, and financial guidance in the development of natural resources outside the United States. Mr. Lilienthal is chairman and chief executive officer, of the new firm; Mr. Clapp is president, with both men being directors, plus directors who are nominees of Lazard Freres.

TEN-FOLD INCREASE MADE IN MONEY & MANPOWER FOR FUSION ENERGY:- The U.S. has increased its money and manpower devoted to the development of controlled energy from fusion reactions "ten fold times in the last two years", Lewis L. Strauss, Chairman, USAEC, said in a television program last week. (Senator Clinton P. Anderson, Chairman of the Joint Congressional Committee on Atomic Energy, had told the Cleveland Rotary Club on August 26th that he favored a very large effort for the fusion program, greater than the current \$33 million USAEC spending.)

NUCLEAR ENGINEERING FIRM TO INSTALL ELECTRONIC DATA PROCESSING MACHINES:- Installation of electronic computing machines is now underway by Nuclear Development Corp. of America (formerly Nuclear Development Associates), White Plains, N.Y. The machines will supply the firm's needs for computing apparatus used in nuclear reactor design and development programs. First to be installed will be a high-speed digital computer of ElectroData Corp., Pasadena, Calif. Others will be built or purchased, as needed, and will eliminate present use of outside machines.

NUCLEAR REACTOR TURNED OVER TO SWISS COMMISSION:- With the closing of the "Atoms for Peace" Conference in Geneva, the nuclear reactor which had been exhibited there by the USAEC has now been transferred to the Swiss Commission for Nuclear Research. The Swiss Government had bought the reactor from the U.S. some months ago. The reactor will be operated by the Swiss Reactor Corp., at Wuerenlingen, as a joint undertaking of Swiss industrial firms (Brown-Boveri, etc.) and the Swiss Commission. President of the Swiss Reactor Corp. is Walter Boveri.

SCANDINAVIAN COUNTRIES PLAN ADDITIONAL NUCLEAR ACTIVITIES:- Plans are now being made to construct a nuclear reactor of 10 to 20,000-kw. capacity at Halden, Norway. The site would be near the Norwegian Sawmill Association's pulp and paper mills..... Indicating expanded nuclear research in Sweden will be the second nuclear research establishment which that country now plans to erect at Studsvik, some fifty-five miles southwest of Stockholm.

INDUSTRIAL RADIATION HAZARDS DISCUSSED AT PUBLIC HEARING:- Hearings on proposed regulations by New York State governing industrial radiation were held last week by the State Labor Department's Board of Standards and Appeals, in New York City. Limits of exposure to radioactive materials, safety measures for handling radioactive substances, jurisdictional problems among state and Federal authorities, were some of the matters covered. (The state code had been revised so that it conforms with tentative safety regulations announced July 1st by the USAEC.)

EXPORT SALES MAY MATERIALIZE FROM ITS GENEVA EXHIBITS, FIRM STATES:- Fifteen different foreign firms and organizations asked General Electric Co. whether that firm could build nuclear reactors for them, the sales staff which G-E maintained at Geneva has now revealed. The number of potential foreign customers for its reactors was "amazing", according to O. B. Falls, Jr., G-E's marketing manager for its atomic power equipment, who recently returned from Geneva. (Several tentative commitments were made to G-E, although firm orders are not yet on hand.)

POWER OF ADVISORY BOARDS TO USAEC IS NEWLY DEFINED:- The powers of the 10 advisory boards (biology, medicine, raw materials, etc.) to the USAEC have now been re-defined in new rules which take effect immediately. The Commission noted that the advisory boards may not establish policy or take action on behalf of the Commission, and must restrict themselves exclusively to giving advice, recommendations and opinions on subjects designated by the USAEC. Persons on the boards will be representative of all groups affected, including small, medium and large business, the USAEC stated. The new rules also require that the chairmen of the advisory boards be full-time Government employees, except when the public interest "will not be adversely affected".

ATOMIC ENERGY FINANCIAL REPORTS...

HIGHER INCOME EXPECTED FROM INVESTMENT TRUST:- Although figures for Tanganyika Concessions, Ltd., for its fiscal year ended July 31st last, are not yet available, recent strong investment demand by British and American investors indicates that net for the year exceeded the \$7,053,989 earned in fiscal 1954. Tanganyika Concessions, a British firm located in Southern Rhodesia (to escape the high U.K. income taxes), is an investment trust deriving its principal income from its substantial holdings in Union Miniere de Haut-Katanga, Belgian copper and uranium producing mine (Belgian Congo), and its 90% holding of Benguela Railway, only railroad operating between Belgian Congo and the sea. Union-Miniere, which for years has supplied substantial tonnages of uranium to the USAEC, had a 1954 profit of \$67,239,200, an increase of \$3,780,000 from the net of the previous year. Benguela Railway recently declared an initial dividend of 10%, worth more than \$1 million to Tanganyika Concessions. (While Union-Miniere no longer enjoys the virtual monopoly which it once had as principal world supplier of uranium ores, since the discovery of additional U.S. and Canadian uranium mineral deposits, it is the world's fourth largest copper producer. Recent world-wide increases in the price of copper therefore make for good future prospects. Union-Miniere is also a member of a Belgian syndicate of industrial firms exploring the potentialities of nuclear energy power plants.)

MERGER NEWS: A proposed merger of Olympic Radio and Television, radio manufacturer, with Victoreen Instrument Co., manufacturer of nuclear instruments and electronic devices and components, has now been called off. The merged firms were to be known as Nuclear Electronics Corp. .... Directors of Lisbon Valley Uranium Co., and Montezuma Uranium, Inc., will submit a merger proposal to stockholders for approval at the meeting tomorrow (Sept. 7). Previously, Devil Canyon Uranium Corp. had been merged into Lisbon Valley; other firms are to be absorbed in the months ahead.

STOCKHOLDING CHANGES MADE: Changes in stockholdings among firms in the nuclear field include the sale by Arthur H. Bunker, president Climax Molybdenum Co., of 1,200 shares of his firm's common stock, reducing his direct holdings to 14,101. (Climax Molybdenum, doing milling of uranium ores for the USAEC in the Western U.S., also controls Climax Uranium Co., uranium ore producing company.)

ANALYSES AVAILABLE:- A review entitled Atomic Energy Stocks is available from Hemphill, Noyes & Co., 15 Broad St., New York City .... Merrill Lynch, Pierce, Fenner, & Beane, 70 Pine St., NYC, covers Sylvania Electric in its Investor's Reader of recent date..... Union Carbide & Carbon Corp. is briefly covered by Bache & Co., 36 Wall St., New York City..... Westinghouse Electric is discussed by Talmadge & Co., 111 Broadway, New York City..... A review of ACF Industries has been made by E. A. Purcell & Co., 50 Broadway, New York City..... A reprint of the 20-page analysis by The Economist (London) entitled Atomic Energy in Harness may be obtained from S. J. Brooks & Co., 185 Bay St., Toronto, Ontario, Canada.

NEW BOOKS & OTHER PUBLICATIONS...on nuclear subjects...

Principles of Nuclear Reactor Engineering, by Samuel Glasstone, consultant to the USAEC. Design, construction and operation of nuclear reactors. Useful for the practicing engineer (for the impact of nuclear energy on his professional activities) and for engineering students. 861 pages. --D. Van Nostrand Co., Inc., New York 3, (\$7.50).

Proceedings of the International Conference on Peaceful Uses of Atomic Energy, Geneva, August, 1955. Complete, unabridged record of the Conference, comprising all papers presented, both oral and written, together with discussions on each paper; in 16 volumes, of 500 pages each. To be in several languages, the English edition will be available at the beginning of 1956. (Any individual scientific paper, in mimeographed form, may be obtained at 25¢ from the U.N. Bookshop.) --U.N. Bookshop, United Nations, New York. (Offered by the U.N. for \$110; or £39; or 450.00 Swiss francs, for the full series of 16 volumes, if ordered up to Dec. 31st, 1955. Individual volume prices are to be announced.)

Metallurgy of Zirconium; B. Lustman and F.H. Kerze, Jr., editors. Div. VII, Vol. 4, Nat. Nuclear Energy Series. Occurrence, reduction, properties and uses of the metal and its alloys. 776 pages. --McGraw-Hill Book Co., New York 36. (\$10.00)

Radiation Sterilization of Food. Four volume survey of the literature. Part I, A-K, \$6.75. Part II, L-Z, \$8.00. Part III, index, \$7.25. Review of literature, \$2.00. --Office of Technical Services, Dep't. of Commerce, Wash. 25, D.C.



NEW PRODUCTS, PROCESSES & INSTRUMENTS...in the nuclear field...

NEW PRODUCTS OFFERED BY MANUFACTURERS:- Portable scintillation spectrometer, Model 98, is said to enable accurate measurement of very low level radiation through almost complete elimination of cosmic ray background count. For mobile or airborne uranium and oil prospecting. Model 98 consists of type 6292 (DuMont) phototube, 1½"x2" thallium activated sodium iodide crystal, amplifier, single channel pulse height analyzer, count rate meter, and high and low voltage power supplies. The manufacturer has available alpha, beta and neutron crystals permitting alpha, beta, gamma and neutron measurement. --Radiation Instrument Development Laboratory, Chicago 36, Ill.

Packaged absorber set, Model KA-4, consists of twenty-two calibrated aluminum absorbers in a fitted wooden case. The set permits selective absorption of various radiant energies, covering a range from zero to 900 mg./sq. cm. The range is adequate for most requirements, including Food & Drug Administration purity tests for iodine-131 to be administered to humans; may also be used to reduce the counting rate of a sample too "hot" for a particular counter. --NRD Instrument Co., St. Louis 14, Mo.

Survey meter, for beta and gamma radiation, is a portable Geiger-Muller counter with separate light-weight probe. The unit is said to have 0.01mr/hr. sensitivity. Three ranges available, 1x, 10x, and 100x, are obtained with a switching arrangement. The probe is lightweight through use of a light-weight plastic material for the housing. --Menlo Research Laboratory, Menlo Park, Calif.

SALES MADE BY MANUFACTURERS:- Leeds and Northrup, Philadelphia, which sold its first "nuclear reactor simulator assembly" to Union Carbide & Carbon Corp. (for exhibit at the recent Geneva Atomic for Peace Conference) is now offering the assembly for general sale, at prices ranging from \$11,000 to \$17,000. The device provides a scale-model "reactor core" and a full size control panel, complete with instrumentation and controls. (An analog computer simulates the reactions in an actual "hot" nuclear reactor.) L. & N. feels there is a market for the device among the 40-odd universities in the U.S. which offer courses in nuclear engineering.

High Voltage Engineering Corp., Cambridge, Mass., has now made delivery on a 2-million electron volt Van de Graaff accelerator to the Junta de Energia Nuclear, Spain. Installation was made at the Centro Nacional de Energia Nuclear de la Moncloa. A recent firm order High Voltage received was from Shell Oil Co., for a 3-million electron volt Van de Graaff. The unit will be installed in the Shell Development Co. research laboratory at Emeryville, Calif., in June, 1956. Among projects Shell expects to use the machine for are the effects of radiation on fuels, lubricants, plastics, and other petroleum-derived products. (High Voltage's order backlog is now about \$3 million, largest in its history. The expanding rate of orders for Van de Graaffs, for use in sterilization of drugs, foods, surgical products and for chemical processing uses, has encouraged the firm to go ahead with plans for a new plant in Burlington, Mass., according to Denis M. Robinson, president.)

PRODUCTS RESULTING FROM NUCLEAR ACTIVITIES NOW OFFERED:- A new tower packing developed by the British Atomic Energy Research Establishment, Harwell, has now been installed and is in successful use in a large chemical firm in the U.S., and in a mid-western U.S. oil refinery. The tower packing, which is material that promotes the intimate contact of gases or vapors with liquids in distillation, fume scrubbing, etc., replaces the more commonly used Raschig rings. Fractionating Towers, Inc., West New York, N.J., manufacture and sell the packing in the U.S. and Canada, under license from the British Ministry of Supply, under the name Spraypak. British engineers originally developed Spraypak to remove heavy water from ordinary water by distillation; it is now being used for that purpose in New Zealand to produce heavy water by distillation using geothermal steam as an energy source. (To produce one ton of heavy water the British report that 330,000 tons of ordinary water had to be distilled.) S. Schwartz & Associates, consulting engineers, New York, have made the U.S. installations of Spraypak, working in conjunction with Fractionating Towers, Inc.

LITERATURE FROM MANUFACTURERS AVAILABLE:- A very useful brochure on medical uses of radioisotopes is Abbott Laboratories "Price List & Progress Report", dated Aug. 1, 1955, available from the firm at N. Chicago, Ill. .... New catalog of Nuclear Instrument & Chemical Corp., Chicago 10, Ill., describes complete line.... Catalog supplement No. 4 may be obtained from Atomic Instrument Co., Cambridge 39, Mass.

BIDS ASKED, CONTRACTS LET...in the nuclear field...

BIDS ASKED:- Proposals will be asked this November by the USAEC for furnishing to it 2 million pounds of zirconium metal, as well as delivery of as much hafnium metal as can be produced from the zirconium to be processed. Deadline for proposals will be Feb., 1956, with deliveries to start in July, 1957. Preliminary schedules are in "Prospectus for Procurement of Zirconium & Hafnium", available from the USAEC, P. O. Box 1105, Pittsburgh 30, Pa.

Plans and specifications for excavating for structural foundations of the engineering test reactor building at the Reactor Testing Station, Idaho Falls, Idaho, are now available under No. AT (10-1)-787. Inquiries should be made to USAEC, P.O. Box 1221, Idaho Falls, Idaho.

CONTRACTS AWARDED:- A contract for modifications and additional facilities in the aircraft nuclear propulsion area of the Reactor Testing Station, Idaho Falls, Idaho, has now been awarded Bickford Construction Co., Portland, Ore., on a low bid of \$657,500. (Facilities at the aircraft propulsion area here are operated under a USAEC contract by General Electric Co.'s aircraft nuclear propulsion department.)

RAW MATERIALS...prospecting, mining, marketing...

UNITED STATES:- Four Corners Uranium Corp., one of the first firms in the uranium field, has now started production from its newly discovered ore body near Morrison, Colo., according to Eugene Sanders, president of the firm, which holds properties in Colorado, Utah, Wyoming, and New Mexico..... The USAEC has now revised its ore-buying schedule for uranium ores which contain more than 6% lime, at its Monticello, Utah, processing mill..... Phillips Petroleum Co. is now testing uranium claims in the Big Indian District in San Juan County, Utah. The claims, which cover about 400 acres, are owned 75% by Republic Uranium Corp., and 25% by a private party in Los Angeles.

CANADA:- Consolidated Denison Mines has now received a special price contract from the Canadian-government owned Eldorado Mining & Refining, Ltd., for \$182,250,000 in uranium concentrates. Deliveries are to start by July 1, 1957, and are to be completed by Mar. 31, 1962..... First results of the underground exploration program at Meta Uranium Mines' property at Beaverlodge Lake, N. Saskatchewan, are "quite satisfactory" according to A.W. Johnson, president.

AUSTRALIA:- Legislation is shortly to be passed in South Australia to allow the state mines department to negotiate with private companies for the establishment of a uranium mine at Mount Victoria. In making the announcement, Mr. Thomas Playford, Premier of S. Australia, noted that the Port Pirie chemical treating plant was large enough to treat all the uranium produced at the new mine.

MEETINGS, COURSES, CONFERENCES...on nuclear subjects...

CONFERENCES:- What it terms the "first open and non-secret" discussion on the commercial use of energy from fusion reactions will now be held Oct. 26, 27 and 28th, 1955, by the National Industrial Conference Board, New York.

Protection by industry against atomic attack is now to be discussed at a conference Nov. 17, 1955, sponsored by the Illinois Institute of Technology, Chicago, and to be held on the Illinois Tech campus. Speakers will be from industry, government, educational, and research institutions.

MEETINGS:- A symposium on uranium and nuclear geology, with Farrington Daniels presiding, will be a part of the 128th national meeting of the American Chemical Society, Sept. 11-16, 1955, at the Univ. of Minnesota, Minneapolis. Some 18 papers will comprise this symposium.

Four papers on the use of radioisotopes in cosmetic research will be heard at the second annual seminar of the Society of Cosmetic Chemists, to be held Sept. 15-16, 1955, in New York City.

COURSES:- Chemical aspects of nuclear energy will be the subject of a course offered during this Fall semester at Illinois Institute of Technology, Chicago. Lecturer will be Dr. Joseph J. Katz, senior chemist at Argonne National Lab.

Sincerely,

The Staff,  
ATOMIC ENERGY NEWSLETTER

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